

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:****1-16. (cancelled)**

17. (new) A diagnostic apparatus, comprising:

validity determining means for determining whether a measurement value obtained by time-sequentially measuring a measurement object is valid;

reference generating means for generating a center value of measurement values determined to be valid as a diagnosis reference used for diagnosing the measurement object each time the measurement value is determined to be valid; and

diagnosing means for diagnosing the measurement object to be normal when the measurement value is within a predetermined range from the center value of the measurement values which is set according to a passage of measuring time.

18. (new) The diagnostic apparatus according to claim 17, further comprising state determining means for determining a state of the measurement object by using the measurement value determined to be valid, the measurement object changing among a plurality of states,

wherein the reference generating means generates the diagnosis reference according to the state of the measurement object.

19. (new) The diagnostic apparatus according to claim 17, further comprising state determining means for determining a state of the measurement object by using the measurement value determined to be valid, the measurement object changing among a plurality of states,

wherein the diagnosing means diagnoses the measurement object according to the state of the measurement object.

20. (new) The diagnostic apparatus according to claim 17,  
wherein the validity determining means determines a measurement value obtained at timing other than predetermined timing, a measurement value inevitably containing an error when the measurement object is measured, and a measurement value taking a value outside a preset range, or a measurement value other than a combination of any one or more of the measurement values to be valid.

21. (new) The diagnostic apparatus according to claim 17,  
wherein the diagnosing means determines the measurement object to be normal when the measurement value takes a value outside the predetermined range from the center value of the measurement values by a predetermined number of times or more and by a predetermined frequency or more, or in a case other than one of these cases.

22. (new) A transport machine, comprising:  
transport means including a component to be a measurement object;  
validity determining means for determining whether a measurement value obtained by time-sequentially measuring a measurement object is valid;  
reference generating means for generating a center value of measurement values determined to be valid as a diagnosis reference used for diagnosis of the measurement object each time the measurement value is determined to be valid; and  
diagnosing means for diagnosing the measurement object to be normal when the measurement value is within a predetermined range from the center value of the measurement values obtained by the statistic processing which is set according to a passage of measuring time.

23. (new) A diagnostic method, comprising:  
determining whether a measurement value obtained by time-sequentially measuring a measurement object is valid;

generating a center value of measurement values determined to be valid as a diagnosis reference used for diagnosis of the measurement object each time the measurement value is determined to be valid; and

diagnosing the measurement object to be normal when the measurement value is within a predetermined range from the center value of the measurement values obtained by the statistic processing which is set according to a passage of measuring time.

24. (new) A program for causing a computer to execute:

a validity determining step of determining whether a measurement value obtained by time-sequentially measuring a measurement object is valid;

a reference generating step of generating a center value of measurement values determined to be valid as a diagnosis reference used for diagnosing the measurement object each time the measurement value is determined to be valid; and

a diagnosing step of diagnosing the measurement object to be normal when the measurement value is within a predetermined range from the center value of the measurement values obtained by the statistic processing which is set according to a passage of measuring time.